



CITY OF KIRKLAND

Planning and Community Development Department

123 Fifth Avenue, Kirkland, WA 98033 - (425) 587-3225

www.kirklandwa.gov

CONSULTING ARBORIST TREE REMOVAL PERMIT REVIEW CHECKLIST

Permit Number: TRE14-05023

Assigned Planner:

Comments Due: _____

Planner: (or Christian/Scott only)

- ☐ Permit fee assessed for multiple tree removals
- ☐ Set up TRE case and enter data
- ☐ Completeness Check of Tree Removal Permit application materials, owner signature, replanting plan
- ☐ Check GIS to determine if any trees are located in...
 - o ROW?¹ (circle one) Y/N _____ (ROW Tree #'s) per review of aerial on KC parcel viewer
 - o Last 2 trees on site? (circle one) Y/N
 - o Critical Areas? (circle one) Y/N (____ foot buffer if applicable)
 - o Shoreline Jurisdiction? Y/N (____ -foot shoreline setback, replacement req'ments _____)
 - o Holmes Point? (circle one) Y/N (attach screenshot showing tree in native veg area)
- ☐ Review permit history for relevant tree removal information (active development permits, prior tree removals and required replacements, 5-year Maintenance Agreements, required landscape buffer, Master Plan or PUD, NGPE, etc) and make copies to include in UF routing
- ☐ Compile arborist report, application form, photos, checklist, etc and send to Consulting Arborist (preferably electronically, use inbox **only** if you email him that you have placed information there) with any additional background needed.
- ☐ Approve if obvious, route to Consulting Arborist if peer review and site visit needed
- ☐ Contact Consulting Arborist, schedule meeting as needed to relay information and deadline for comments

Urban Forester:

- ☐ Meet with planner if requested
- ☐ Conduct Urban Forestry review (see review process on page 3)
- ☐ Review for completeness. If additional information is required, complete the following:
 - o Email comments to planner
 - o Be clear enough so that planner can communicate what's needed to the applicant
- ☐ When UF review complete:
 - o Complete Tree Case Data Sheet (p. 2)
 - o Return checklist and materials to assigned planner

Planner:

- ☐ Contact applicant with permit determination: approved, approved with conditions, denied, or if the Arborist needs more information. Specify trees by #. Any denials must be in writing and include appeals procedure. Email contact is OK, but phone calls are not (because the date you provide the determination may be important if they're appealing the decision).
- ☐ Scan arborist report and permit application into TRE case, permit applications go to Prins for records archives
- ☐ Sign off UF workflow in Energov when complete, include conditions
- ☐ Notify Public Works (Mark Padgett) for ROW tree determinations

¹ If requests involve ROW and private trees, PCD makes decision & advises Mark Padgett in PW



CITY OF KIRKLAND

Planning and Community Development Department

123 Fifth Avenue, Kirkland, WA 98033 - (425) 587-3225

www.kirklandwa.gov

TREE DATA SHEET

- ☐ Consulting UF to complete this form and route to planner
- ☐ Planner to input data in TRE case. List date by which replacements should be planted if required (typically 6 months is adequate)

At least two trees to remain on-site: Yes ☒ No ☐

Replacement Trees Required: 0

Area of Shoreline Vegetation Required: 0

Most trees removed from critical areas, NGPEs, and the last 2 trees on a property removed have a 1:1 replacement requirement. Shoreline replacement requirements can be tricky; work with the Planner on these.

Significant Trees:	Hazard	Nuisance	2-per 12 month allowance
1		X	
2		X	
3			X
5		X	
8		X	
9		X	
10		X	
11		X	
13		X	
14		X	
15			X
16		X	
17		X	
18		X	
19		X	
20		X	
21	n/a	n/a	n/a
24	n/a	n/a	n/a

The arborist report is accurate. The proposal intent is to re-landscape the frontage with 19 tree removals and 39 tree plantings. Trees #1, 2, 5, 8, 9, 10, 11, 13, 14, 16, 19 and 20 are nuisance trees due to damage from past maintenance practices. These maintenance practices have allowed for many of the trees proposed for removal to become infested with a range of diseases, including trees #17 and 18. Trees #21 and 24 are in good health but are neither tremendous specimens nor exceptional trees.

The proposed tree plantings include 10 Hogan's Cedar (reaching a mature height of 40-feet), 1 Japanese Snowbell (reaching a mature height of 30-feet), 11 Kousa Dogwood (reaching a mature height of 25-feet), and 13



CITY OF KIRKLAND

Planning and Community Development Department

123 Fifth Avenue, Kirkland, WA 98033 - (425) 587-3225

www.kirklandwa.gov

Osakazuki Japanese Maple (reaching a mature height of 15-feet). Once mature, the new landscape trees, particularly the Hogan's Cedar, will provide a more ecologically rich canopy than the current trees proposed for removal.



Typical birch at site, which shows die-back caused by bronze birch borer



CITY OF KIRKLAND

Planning and Community Development Department

123 Fifth Avenue, Kirkland, WA 98033 - (425) 587-3225

www.kirklandwa.gov



Root decay fungus and conks in tree #20

CITY OF KIRKLAND TREE REMOVAL PERMIT APPLICATION

Permit No. TR14-05023

Before filling out this form please review the TREE REMOVAL INFORMATION GUIDE or contact the Planning Department at 425.587.3225.

Contact & Property Information (please write legibly)

Property Owner: <u>Kirkland Partners, LLC</u>	Phone: <u>360-867-1900</u>	Email: <u>info@koelschsenior.com</u>
Site Address: <u>12215 NE 128th St, Kirkland, WA 98034</u>		
Mailing Address (if different) <u>111 Market St NE, Suite 200, Olympia, WA 98501</u>		
Contact Name: <u>Jeff Yater</u>	Phone: <u>360-528-3343</u>	Email: <u>jefferjdevelopmentservices.com</u>

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the information answered on this form is true and complete to the best of my knowledge. I understand that the City of Kirkland is relying on this information to make its decision. Trees removed illegally may result in the City pursuing monetary penalties and/or restoration under KZC 95.55.

Owner Signature


 (acknowledging and supporting request)

ARBORIST REPORT: Attach an arborist report from an individual with relevant education and training in arboriculture or urban forestry, having two or more of the following credentials:

- ☒ International Society of Arboriculture (ISA) Certified Arborist
- ☒ Tree Risk Assessor ~~Certification (TRAGE)~~ as established by the Pacific Northwest Chapter of ISA ← Trag (Tree Risk Assessor Qualification)
- ☐ American Society of Consulting Arborists (ASCA) registered Consulting Arborist
- ☐ Society of American Foresters (SAF) Certified Forester for Forest Management Plans

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the information answered above is true and complete to the best of my knowledge. I understand that the City of Kirkland is relying on this information to make its decision. Trees removed illegally may result in the City pursuing monetary penalties and/or restoration under KZC 95.55.

<u>MA</u>	<u>PN-7671A</u>	<u>12/31/16</u>	<u>TRAQ Certified 2019</u>
Arborist Signature	Arborist Credentials #1 ID & Exp Date		Arborist Credentials #2 ID & Exp Date

FEE: A check to the City of Kirkland for the required application fee

Attach Site Plan (use Page 3 or attach a screen shot, survey, drawing, etc.)

NOTE: The site plan must identify the approximate location of all significant trees on the property. Include location and species of trees to be removed, retained, and replaced. This form will not be processed without a completed site plan.

TARGET
9/9

Site Plan

Number of significant trees remaining on property after proposed removals: _____

* Please see report for more information.

allworth design

LANDSCAPE ARCHITECTS

August 11, 2014

City of Medina
Department of Planning and Community Development
123 5th Ave
Kirkland, WA. 98033

Re: Tree Removal Permit Application
Madison House
12215 NE 128th St
Kirkland, WA 98034

Dear Sir/Madam,

Allworth Design has been contracted by the new owners of Madison House elderly care facility to develop a new landscape concept for the property. The new ownership is committed to improving the safety and aesthetic of the property with the purpose of enhancing the community. Our mission is to develop a landscape plan that would attain the goals of improving safety by opening sight lines, improving walkability and usability of the landscape by the elderly residents, reducing landscape and building maintenance costs and visually tying the property into the landscape of the neighboring healthcare campus.

These objectives have been attained in our design by developing a plan that focuses on improving the overall aesthetic of the exterior of the building by removing overgrown and unhealthy shrubs, removing nuisance and diseased trees, replacing and reconfiguring paved areas, and incorporating plant materials and planting schemes from the neighboring health center campus.

Although our proposed landscape plan requests the removal of some unhealthy, unsightly and dangerous trees, the plan aims to achieve a viable long-term landscape scheme that enhances the city's tree canopy. This is to be achieved by integrating long-lived and native species that will mitigate the heat island affect, provide habitat and contribute to the region's natural beauty, aesthetic character and livability of the community.

Date (rev. 8/7/14)

Madison House

Page 2 of 4

Relating to this proposal, please find the Tree Removal Application Permit form, the Arborist's report and a proposed tree planting/replacement plan.

Best regards,
ALLWORTH DESIGN,

Randy Allworth
Principal

TO: Ron Hastie
JOB SITE: 12215 NE 128th St.
SUBJECT: Madison House Tree Inventory and Report
DATE: July 16, 2014
PREPARED BY: Chris Madison
ISA Certified Arborist PN-7671A
ISA Qualified Tree Risk Assessor

Contents

Summary
Assignment & Scope of Report
Methods
Observations
Discussion
Recommendations
Glossary
References
Appendix A – Assumptions & Limiting Conditions
Appendix B – Photographs
Appendix C – Kirkland Tree Protection Specifications
Attachments:
Table of Trees
Marked Up Site Survey
Site Classification Map

Summary

It's my opinion that **Trees 1, 2, 5, 8, 9, 10, 11, 13, 14, 16, 19, and 20** are nuisance trees as defined by the City of Kirkland. These trees have had a poor history of pruning and maintenance, which have left them in a state that would require an unreasonable amount of maintenance to keep healthy and hazard free on a site frequently used by elderly patrons.

Trees 17 and 18 are not viable trees for long term retention. Trees 17 and 18 are in fair health condition now, but are very likely to further decline in health given the condition of the other cherry trees on site and become nuisance trees in the near future. Removal now during this landscaping project would save money and resources. Cherries in general have numerous health issues in this region, and should be replaced by a tree more suited to our region.

Trees 21 is not a very good candidate for long term retention considering this project, and landscaping activities taking place nearby. It can be easily replaced with a tree of equal size, without losing the ecosystem services it provides.

Tree 12 is not significant.

Tree 23 is a specimen tree for the space, and should be preserved during all phases of the landscaping work. Please see the [Kirkland Tree Protection Specifications](#) for more details.

Assignment & Scope of Report

This report outlines the site inspection by Chris Madison of Tree Solutions Inc. on June 25, 2014. Included are observations and data collected at the site located at 12215 NE 128th Street. Ron Hastie, of RJ Development, requested these services to acquire information for project planning.

Limits of Assignment

Unless stated otherwise: 1) information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection; and 2) the inspection is limited to visual examination of the subject trees without dissection, excavation, probing, climbing, or coring unless explicitly specified. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.

Tree Solutions did not review any reports or perform any tests related to the soil located on the subject property unless outlined in the scope of services. Tree Solutions staff are not and do not claim to be soils experts. An independent inventory and evaluation of the site's soil should be obtained by a qualified professional as determined to be needed by the property manager if an additional understanding of the site's characteristics is needed to make an informed decision.

Additional Assumptions and Limiting Conditions can be found in [Appendix A](#).

Methods

I evaluated tree health and structure utilizing visual tree assessment (VTA) methods. The basis behind VTA is the identification of symptoms, which the tree produces in reaction to a weak spot or area of mechanical stress. A tree reacts to mechanical and physiological stresses by growing more vigorously to re-enforce weak areas, while depriving less stressed parts. (Mattheck & Breloer 1994) An understanding of the uniform stress allows me to make informed judgments about the condition of a tree.

The diameter at standard height (DSH), 54-inches above grade, was measured for each tree included in my scope of services. Included in the report are the species, size, health and structural condition, and any additional notes for each tree assessed. A [Marked Up Site Survey](#) with tree locations and proposed trees to be removed is attached to this report.

I used a True Pulse Laser range finder to determine drip line measurements. I took drip line measurements from at least two cardinal directions ninety degrees to each other (where possible). The average of these measurements should be used to determine the tree's drip line. Drip lines can be found in the [Table of Trees](#).

Where a tree splits into several trunks close to ground level, the DSH for the tree was determined using a formula to convert the multiple-trunk area into a single trunk diameter. The formula I used is the square root of the sum of the DSH for each individual stem squared (example with 3 stems: $DSH = \sqrt{DSH_1^2 + DSH_2^2 + DSH_3^2}$).

square root $[(\text{stem1})^2 + (\text{stem2})^2 + (\text{stem3})^2]$. These measurements are indicated with an asterisk in the Table of Trees, with the multiple trunks listed in the 'notes' column.

Observations

I visited the site on June 25, 2014. During my visit I met with Chris Barnes, a landscape architect working with Allworth Design. The company was hired to design a new landscape to be installed at the Madison House: a retirement home located in Kirkland. I walked through the site with Chris as he described the work to be done, which trees were proposed to be removed, and which trees are planned to be retained.

Back in the office, I spoke to Ron Hastie of RJ Development, the company who is in charge of managing the remodel and updating of the landscape of this property. It's the intent of the owner, Koelsch Senior Communities, to redesign and upgrade the landscaping of the area which would involve the removal of nineteen trees and replacing them with new trees better suited to the site. When speaking to Ron, he had mentioned that some of the residents of the Madison house have complained to him about the pollen and leaf litter that is left on their cars after parking under the birch trees. I spoke to him on June 7, 2014.

The Site

The Madison House is located at 12215 NE 128th St in Kirkland, WA. The building is located just south of the Evergreen Health Medical Center. The site is landscaped with many ornamental plants including Rhododendrons (*Rhododendron* sp.), Coral bells (*Heuchras* sp.), boxwoods (*Buxus sempervirens*), Hostas (*Hostas* sp.), and numerous other annuals and perennials. The landscape is well cared for, as evidenced by the tidy and weed free appearance.

After my visit, I contacted Scott Guter of the Kirkland Planning and Community Development office and went over the site with him. He confirmed with me that this area is a category C Landscape. Scott also pointed out that steep slopes exist near this property. I looked up the site on NW Maps to confirm that no trees on steep slopes were to be removed. Some of the trees in the northeast of the site (which I did not measure) exist on a steep slope area- however these trees are to be retained. A Site Classification Map is attached to this report indicating the steep slope areas- I have added a border indicating the area of this project onto the map.

The soils near the building were very wet, and muddy in spots: signs that the site is well irrigated, and the drainage is poor.

The Trees

All of the trees I looked at on site are ornamental, and non-native to the area. Some trees on the border are native, and to be retained.

Tree species on this site include Flowering Cherries (*Prunus serrulata*), Flowering plums (*Prunus cerasiformis*), Hollywood junipers (*Juniperus chinensis* 'Torulosa'), Raywood ash (*Fraxinus oxycarpa* 'Raywood'), and European birch (*Betula pendula*). Numerous ornamental shrubs and groundcovers are planted near the bases of these trees.

These trees get regular treatment from Washington Tree and Lawn Care company. During my visit an applicator truck from Washington Tree and Lawn Care came by to treat the trees. When asked what they were applying they answered "fertilizer and insecticide." The formula is most likely a broad spectrum systemic insecticide, along with a high nitrogen fertilizer. A high nitrogen fertilizer can sometimes increase the chance of pest and pathogen attacks on trees, as the tree expends more energy using the available nitrogen to grow rather than spending its resources towards developing an immune system against pests and pathogens. The insecticide is most likely used for boring insects that attack the Cherries and Birch (see more details below).

Most of the trees near the buildings exhibit forms that suggest a past history of heavy pruning for maintenance. Whether the trees were pruned to control their height, to create clearance for the building, or for aesthetics is unknown. Along with the maintenance pruning, additional thinning was done on many of the cherries- a common pruning method used by landscapers purely for aesthetic reasons. If this pruning activity was improperly timed, it could have aided in the introduction of boring insects into the cherry and birch trees (the species most likely to be attacked by nearby boring insect species).

Many of the trees are flowering cherry trees, showed significant dieback in their canopy. During my visit I noted signs of Cherry bark tortrix (*Enarmonia formosana*) on many of the trees (see [Photo 1](#)). Cherry bark tortrix (CBT) is a moth whose larval form eats away at the vascular tissues of the plant, which cause branch dieback and eventual death of the entire tree if infestations are heavy enough. Branches which have died back do not recover, and pose a potential hazard to nearby targets. CBT is attracted to trees with fresh wounds on it, including pruning wounds. If trees were pruned during the time that adults are active (May through September) then infestation could have occurred.

Blossom brown rot (*Monilinia* sp.) could also be seen in many of the cherry trees. The symptoms of blossom brown rot include twig and branch dieback as well as dead flowers and leaves left hanging on the branches. Blossom brown rot overwinters on twigs and branches, and can cause dieback through the formation of stem girdling cankers.

Many of the birch trees have been topped in the past, as mentioned in the notes above. Some of the birches on this property were pruned using "topiary" techniques, the result is that many of these trees now exhibit poor structure. Any branches allowed to grow on these trees would have poor attachments, and present some level of risk to targets below.

Aside from structural defects to the birch from poor pruning, these trees are all susceptible to an attack from Bronze birch borer (*Agrilus anxius*). Bronze birch borer (BBB) is a beetle that lays eggs into the trees bark; after the eggs hatch the larval form of the insect eats through the vascular tissues of the tree- leading to top dieback and eventual death if the infestation is great enough. These insects are attracted to stressed trees, and wounds caused by pruning. If trees were pruned during the time that adults are active (June through August) then infestation could have occurred. BBB is known to be present in the Kirkland area, so it's very likely that all birch trees on this site are vulnerable to a BBB infestation. Birch trees thrive in cool moist environments, and having these plants located near a parking lot is likely to stress these plants. Stressed birch trees are more likely to attract BBB.

Tree 1 is a European birch measuring 10.5 inches DSH. This tree has a bowed trunk and a history of top cuts- resulting in a fair structural form.

Tree 2 is a European birch measuring 9.6 inches DSH. This tree has a history of top cuts- resulting in a fair structural form.

Tree 3 is a Flowering plum measuring 8.9 inches DSH. This tree has multiple branch attachments at a single union, with narrow angles of attachment. This form is also seen in Trees 20 and 24- both flowering plums. It's most likely these trees were formed pruned this way by the nursery. While this form is typical to this tree, it's not a structurally strong form which is why I gave this tree a fair structural rating (see [Photo 2](#)).

Tree 5 is a flowering cherry measuring 16.4 DSH, and showed significant dieback in the crown (see [Photo 3](#)). This tree is situated by the entrance way to the east, with one of the scaffold branches hanging over a bench in the front. I estimated this tree to have a 40% live crown ratio (LCR). Any branches that die on this tree will possess a potential hazard to the targets below, including sidewalk pedestrians, the fence, and the bench and its users. This tree had signs of blossom brown rot and CBT.

Trees 6 and 7 are flowering cherries measuring 14 and 18.8 inches DSH respectively. The diameter for Tree 7 was determined using the single trunk formula. These trees are good health with fair structural condition. These trees showed some signs of blossom brown rot. Both trees have had a history of being pruned back away from the building. These trees are to be retained.

Tree 8 is a European birch, measuring 13.6 inches in diameter. I rated this tree with poor health and poor structure. The canopy of this tree is dying back, a typical symptom of BBB (see [Photo 5](#)). This tree was in the worst condition of all of the birches on site.

Tree 9 is a European birch, measuring 11.2 inches in diameter. This tree has a history of top cuts- resulting in a fair structural form (see [Photo 6](#)).

Tree 10 is a European birch, measuring 11.2 inches in diameter. This tree has a history of top cuts- resulting in a "lollipop" shape, which I have given a 'poor' structural form rating (see [Photo 4](#)).

Tree 11 is a flowering cherry measuring 10.1 DSH (using the single trunk formula). This tree also showed significant dieback in the crown (see [Photo 4](#)). This tree is located just west of the service entrance on the western wing of the building. I estimated this tree to have 30% LCR. Like **Tree 5**, Any branches that die on this tree will possess a potential hazard to the targets below using the service entrance. This tree had signs of blossom brown rot and CBT.

Tree 12 is a Hollywood Juniper measuring at 5.2 inches DSH. This tree is not six inches or larger, so it is NOT a significant tree.

Tree 13 is a European birch, measuring 7.2 inches in diameter. This tree has a history of top cuts- resulting in a fair structural form (see [Photo 6](#)).

Tree 14 is a European birch, measuring 11.2 inches in diameter. This tree has a history of top cuts- resulting in "lollipop" form which I have rated as poor structural form (see [Photo 6](#)).

Tree 15 is a Hollywood Juniper measuring at 6.5 inches DSH.

Tree 16 is a flowering cherry measuring 10.1 DSH (using the single trunk formula). This tree is located on the outer edge of the building. This tree has a large structural root growing towards the building. This tree has large surface roots, indicating either shallow soils, or soil saturation. This tree also had a sparse canopy, an indication of CBT and blossom brown rot.

Tree 17 and **Tree 18** are flowering cherries located in a landscape bed in the northwest part of the property. **Tree 17** measures 10 inches DSH (using the single trunk formula), and **Tree 18** measures 13.4 inches DSH. These trees have a shared canopy, and both show signs of fire blight. **Tree 18** showed signs of flagging on the northern branches, which may indicate early signs of CBT and/or blossom brown rot. While I rated these trees with a fair health rating, after noting the condition of the other nearby cherries on this site it's my belief that it's very likely their condition will worsen over time- further adding maintenance issues, and making these trees nuisance trees in the near future. I do not think these trees are viable for retention, and I believe it would be more cost effective to replace these trees while other landscape work is planned.

Tree 19 is a flowering cherry measuring 19.9 inches DSH. I rated this tree at poor health, because it possessed a sparse canopy with dieback of the smaller branches (see [Photo 7](#)). I also noted that the graft union of the tree was swollen, so I had to take the measurement below this area. The swelling of this union can indicate possible defects, which did affect my health and structural rating of this tree. Topping cuts are visible throughout the canopy. This tree had signs of blossom brown rot and CBT.

Tree 20 is a Flowering plum measuring 13.2 inches DSH. This tree has multiple branch attachments at a single union with narrow angles of attachment. This tree also has a lot of dieback in the crown, and a sparse canopy. I rated the health of this tree as poor, and its structural condition fair (see [Photo 7](#)).

Trees 21 and **22** were two Mugo pines (*Pinus mugo*) with multiple stems. Using the trunk conversion formula Tree 21 measures at 12.6 inches DSH and Tree 22 measures at 14.5 inches DSH.

Tree 21 had evidence of sequoia pitch moth (*Synanthedon sequoia*). While attacks are unsightly, infestations don't cause significant damage to pines, limb loss and stress can be associated with attacks. However, if significant landscaping activities were to take place nearby this tree, the associated stress on the tree could further the pitch moth attack. This tree also has a top heavy form due to the lack of good structural pruning when it was younger. This tree is small enough to be suitably replaced by a tree of similar size on the property. Given its poor aesthetic form, likelihood of poor health in the near future, and ease of replacement, I believe this tree could be easily removed and replaced without losing the ecosystem services it provides.

Given the stresses that Tree 21 will experience, it's likely that the pitch moth attack could worsen over time. Given the poor structural pruning of this tree and the potential for further health decline, I don't believe this tree is a viable tree for retention.

Tree 23 is a large Raywood ash tree. This tree is in good health and good structure, and serves as a focal point for the parking lot. This tree is to be retained, but will have some work being done below it. On site Chris Barnes indicated to me that the gazebo to the north will be removed, with some grading and demolition work to be done beneath the drip line. In my opinion this tree is of high value to the

landscape, and should be protected during landscaping activity in accordance the Kirkland Tree Protection Specifications.

For more details on tree conditions please refer to the Table of Trees.

Discussion

Many of the trees proposed to be removed by Allworth Design for landscaping purposes are significant sized trees and therefore protected by the City of Kirkland (City of Kirkland Code Chapter 95.23). Protected trees may only be removed if they are deemed Hazardous or Nuisance trees in a report prepared by a qualified arborist and further approved by the City of Kirkland.

A nuisance tree as defined by the City of Kirkland code chapter 95 is a tree "... causing obvious physical damage to private or public structures, including but not limited to: sidewalk, curb, road, driveway, parking lot, building foundation, or roof; or b. Has sustained damage from past maintenance practices. The problems associated with the tree must be such that they cannot be corrected by reasonable practices including but not limited to: pruning of the crown or roots of the tree, bracing, and/or cabling to reconstruct a healthy crown" (City of Kirkland Code 95.10).

Given this definition, I believe all of the birch on this site (**Trees 1, 2, 8, 9, 10, 13, and 14**) are nuisance trees due to poor past pruning practice leading to poor/fair structures. Unless these trees are continually maintained with aggressive pruning, these trees will grow branches that have poor attachments possessing some risk to targets below. These trees are also poorly placed and possess a high vulnerability to BBB. Continually treating these trees for BBB and continually pruning for maintenance of these trees is unreasonable for most landscaping budgets. Furthermore, the residents of the Madison Home expressed discontent with the pollen and leaf litter left on their cars from these trees.

I also believe that many of the cherry trees in this area are also nuisance trees due to their poor pruning history and poor health. **Trees 5, 11, 16, and 19** are all nuisance trees in my opinion. I call these trees out as nuisance trees due to their poor health (CBT and blossom brown rot), and dead parts in the canopy- some of which have targets below. Even with regular fertilizing and insecticide applications these trees are not thriving in their current location.

Tree 12 is not significant.

Recommendations

- Acquire the proper permits before any tree removal.
- It's my opinion that **Trees 1, 2, 5, 8, 9, 10, 11, 13, 14, 16, 19, and 20** are nuisance trees as defined by the City of Kirkland. If removed, these trees should be replaced by a tree species more suited to long term preservation on this site.
- Trees that are to be retained and have landscaping work done nearby should have tree protection specifications followed (see City of Kirkland Tree Protection Specifications).
- **Tree 23** should be protected during demolition and landscape installation work. This tree is a specimen tree on the property, and offers good shade to the central parking lot area.
- All landscaping work should follow the requirements of a 'category C' landscape, as outlined by the City of Kirkland municipal code 95.40.

Glossary

ASCA: American Society of Consulting Arborists

DBH or DSH: diameter at breast or standard height; the diameter of the trunk measured 54 inches (4.5 feet) above grade (Matheny *et al.* 1998)

ISA: International Society of Arboriculture

live crown ratio (LCR): 1. the percentage of the total stem length covered with living branches, used to estimate the ability of the tree's crown to nourish the remaining part of the tree. (Dunster 1996);
2. the ratio of crown length to total height (ISA 2013)

phototropic growth: growth toward light source or stimulant (Harris *et al.* 1999)

significant size: a tree measuring eight inches in DSH or greater (Bellevue City Code)

References

Dunster, Julian & Katherine. Dictionary of Natural Resource Management. Vancouver: UBC Press, 1996

Harris, Richard W., James R. Clark, and Nelda P Matheny. Arboriculture: Integrated Management of Landscape Trees, Shrubs, and Vines, 4rd Ed. New Jersey: Prentice Hall, 2004.

Matheny, Nelda and James R. Clark. Trees and Development: A Technical Guide to Preservation of Trees During Land Development. Champaign, IL: International Society of Arboriculture, 1998.

Mattheck, Claus and Helge Breloer, The Body Language of Trees.: A Handbook for Failure Analysis. London: HMSO, 1994.

Appendix A – Assumptions & Limiting Conditions

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant's prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of the those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, climbing, or coring. Consultant makes no warranty or guarantee, express or implied, that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

Appendix B –Photographs



Photo 1- Tree 3. Note the close angle of attachments.

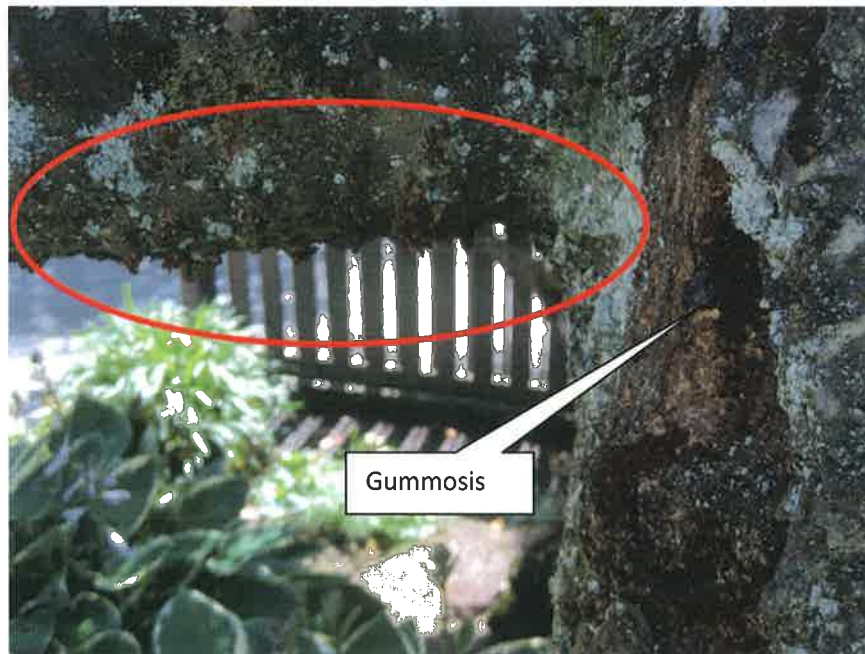


Photo 2- Evidence of Cherry bark tortrix on Tree 5. Note the orange colored frass tubes hanging from the tree branch. Also note the gummosis, a response *Prunus* sp. give in attempt to ward off CBT.



Photo 3- Tree 5 showing some dieback in the upper crown. Note area of dieback is above the branch that showed CBT evidence (Photo 2). Hanging foliage and flowers are signs of blossom brown rot.



Photo 4- Note the overhanging branches of Tree 11, which are located over the service entrance. Dead twigs and old foliage/flowers hanging likely signs of blossom brown rot. Also note the 'lollipop' form of Tree 10.



Photo 5- Tree 8. Note the top dieback, most likely due to bronze birch borer. Also note history of poor pruning history involving topping cuts, with no current top regrowth.

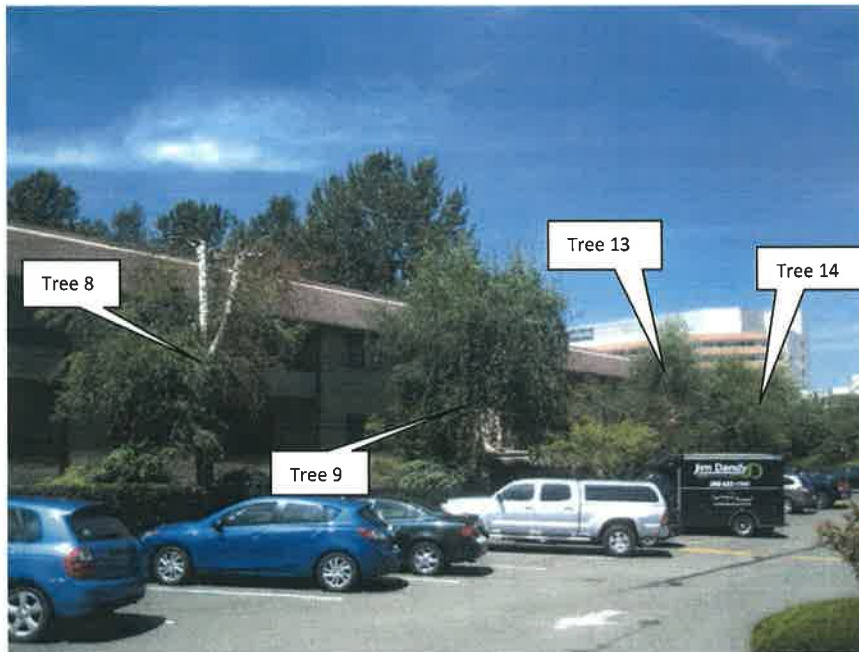


Photo 6- The row of birches as seen from the east. Note the extreme dieback of Tree 8, and the topped forms of Tree 9 and 13. (The brightness and contrast of this photo was adjusted so that the tree forms could be more visible)

